FILE NOTATIONS

Entered in NID File ....

Location Map Pinned ....

Card Indexed ....

Checked by Chief *RWB 12-10-73*

Approval Letter

Disapproval Letter .....

COMPLETION DATA:

Date Well Completed *1-29-74*

OW..... WW..... TA.....

GW..... OS..... PA.....

Location Inspected ...

Bond released

State or Fee Land ....

LOGS FILED

Driller's Log..........

Electric Logs (No.) ....

E........ I........ Dual I Lat........ GR-N........ Micro........

BHC Sonic GR........ Lat........ Mi-L........ Sonic........

CBLog........ CCLog........ Others..............................

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL
OIL WELL [X] GAS WELL [ ] OTHER ___ SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR
Texas Gas Exploration Corporation

3. ADDRESS OF OPERATOR
P. O. Box 52310, Houston, Texas 77052

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
1630' FNL & 1000 FEL Section 11, T24S, R13E (NW SE NE)
At proposed prod. zone
Straight Hole Unorthodox 190' to far North & 180' To far west

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
About 26 miles SW of Green River

5. LEASE DESIGNATION AND SERIAL NO.
U-0141568

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
No

7. UNIT AGREEMENT NAME
No

8. FARM OR LEASE NAME
TGEC-FEDERAL 11-24-13

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 11, T24S, R13E

12. COUNTY OR PARISH
Emery

13. STATE
Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
1000'

16. NO. OF ACRES IN LEASE
800

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
None

19. PROPOSED DEPTH
4,000

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
Gr. 4740.2'

22. APPROX. DATE WORK WILL START*
December 15, 1973

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	8-5/8"	24#	100'	100 sks.
7-7/8"	5-1/2"	15.5, 17#	4,000'	500 sks.

Recomend, min 150 surface pipe due To Blow ...

1. Drill 11" hole to ± 100'.
2. Set 8-5/8" - 24# casing @ 100' and cement to surface.
3. Nipple up 10" BOPs and test to 500#.
4. Drill 7-7/8" hole to ± 4,000' or 200' into the Mississippian.
5. Run logs (DIL, CNL, Density).
6. DST any shows.
7. If productive, run 5-1/2" csg. and cement with 500 sks. If not, plug and abandon according to Federal and State Rules.

NOTE: Operator will mud up out from under surface pipe and will maintain mud weights adequate to control all formation pressures.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED R. D. Berger TITLE Administrative Manager DATE Nov. 21, 1973

(This space for Federal or State office use)

PERMIT NO. 43-015-30017 APPROVAL DATE ___

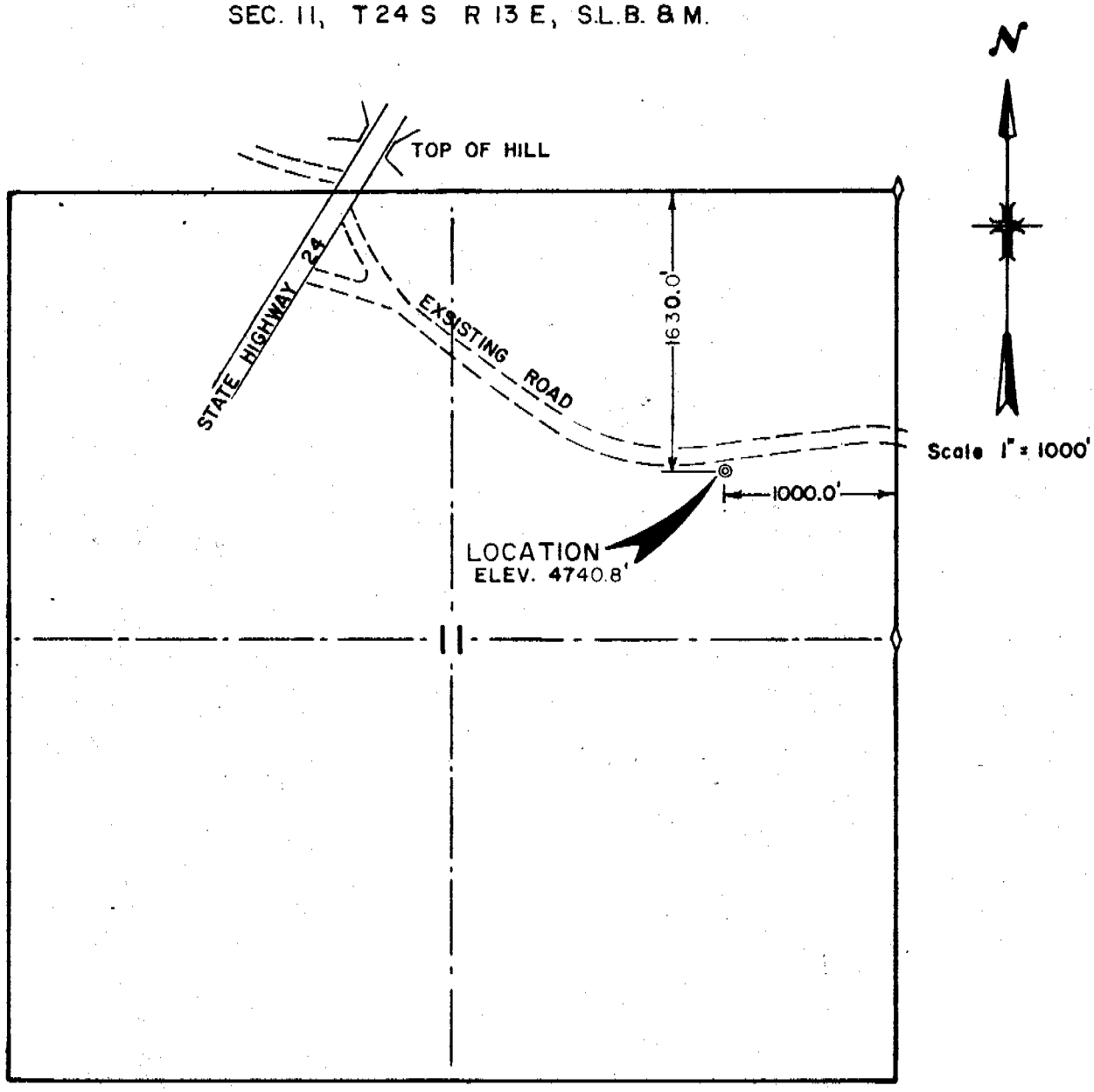
APPROVED BY ___ TITLE ___ DATE ___
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

WELL LOCATION

1630 FT. S.N.L.— 1000 FT. W.E.L.

SEC. 11, T 24 S R 13 E, S.L.B. & M.



I, Richard J. Mandeville do hereby certify that this plat was plotted from notes of a field survey made under my direct responsibility, supervision and checking on Nov. 12, 1973.

Richard J. Mandeville
Registered Land Surveyor

REVISED 11/30/73

WESTERN ENGINEERS, INC.
WELL LOCATION
TEXAS GAS EXP. CORP.
FED. 11-24-13
EMERY COUNTY, UTAH

SURVEYED D.B. DRAWN R.W.O.

GRAND JUNCTION, COLO. 11/30/73

WELL: TGEC-FEDERAL 11-24-13 #1 U-0141568

LOCATION: 1630' FNL & 1000' FEL Sec. 11, T-24-S, R-13-E

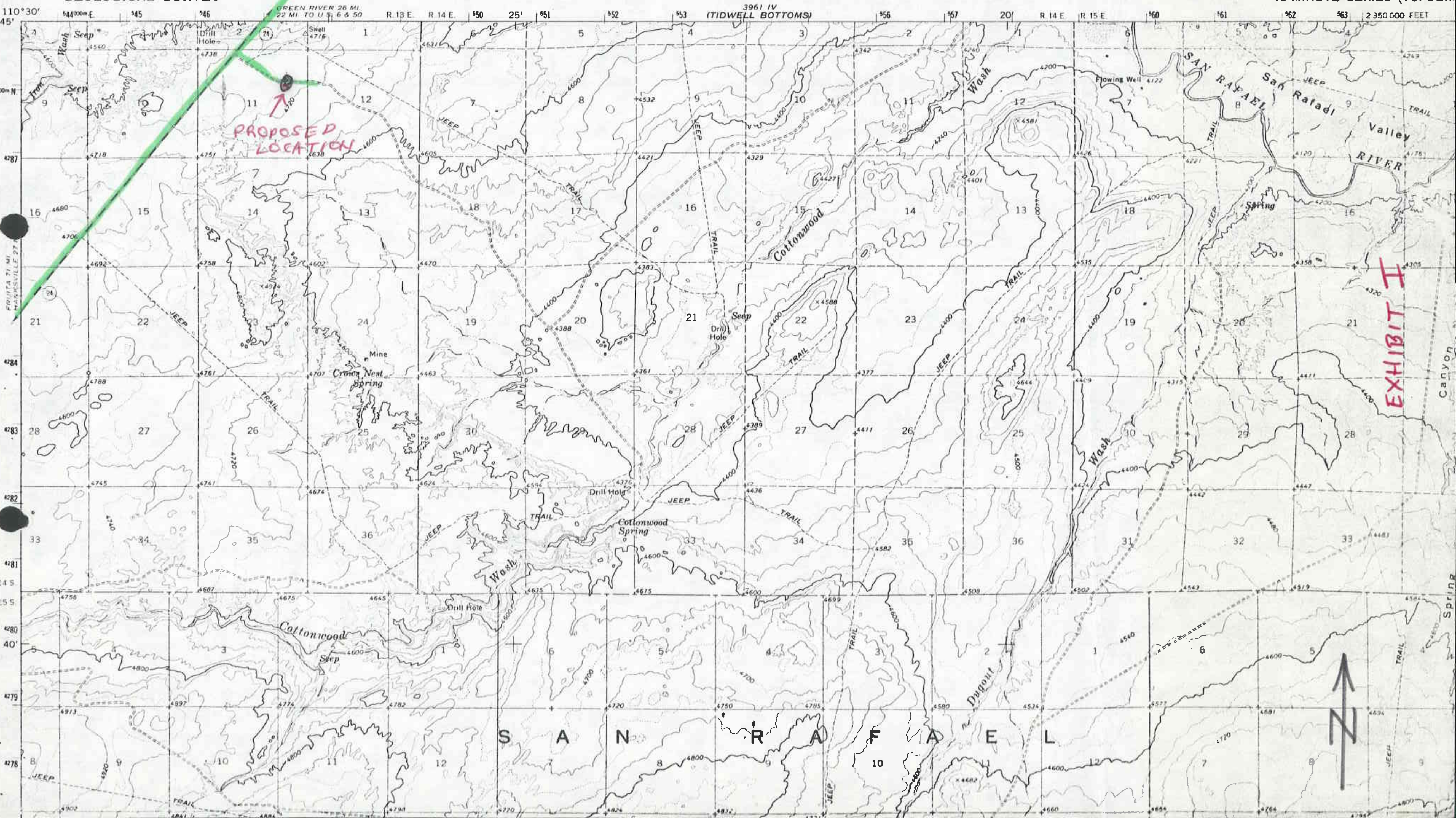
COUNTY: Emery STATE: Utah

DEVELOPMENT PLAN FOR SURFACE USE

1. **Existing Roads:** Exhibit I, II, III
2. **Planned Access Roads:** Only 60' South from Existing road, Exhibit III
3. **Existing Wells:** Exhibit IV & V
4. **Lateral Roads:** None
5. **Tank Batteries and Flowlines:** Exhibit III
6. **Water Supply:** San Rafael River 7 miles NE of well.
7. **Waste Disposal:** Haul off from location material that will not burn in burn pit or deteriorate if buried.
8. **Camp Locations:** None
9. **Airstrip Locations:** None
10. **Rig Layout:** Exhibit VI
11. **Restoration:** Grade location back to original conformity and restore top soil which will be stockpiled and saved, then re-seed according to the requirements of the Bureau of Land Management. If reserve pit is too wet to cover immediately, will fence in until dry.
12. **Other Information:**
    Location falls on a flat ridge about 1/2 mile East of Highway 24 (Greenriver to Hanksville) or 2 miles South of Iron Wash. Top soil is blow sand. Sparse vegetation; Brighann Tee grass, Indian Rice grass, Curly grass, Loco Weed and numerous annuals.
    No major drainage.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

THE FLAT TOPS QUADRA
UTAH
15 MINUTE SERIES (TOPOGRA



DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

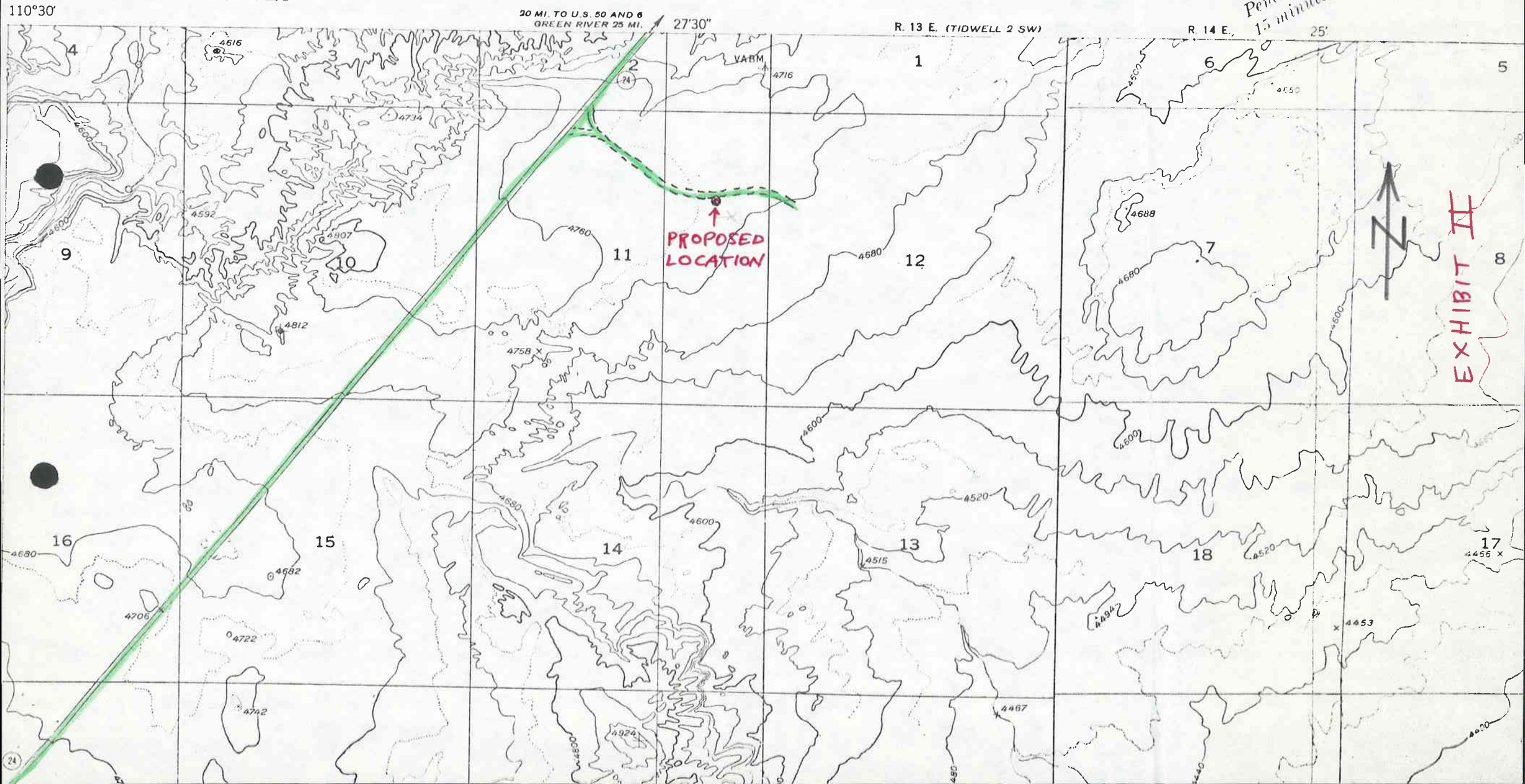


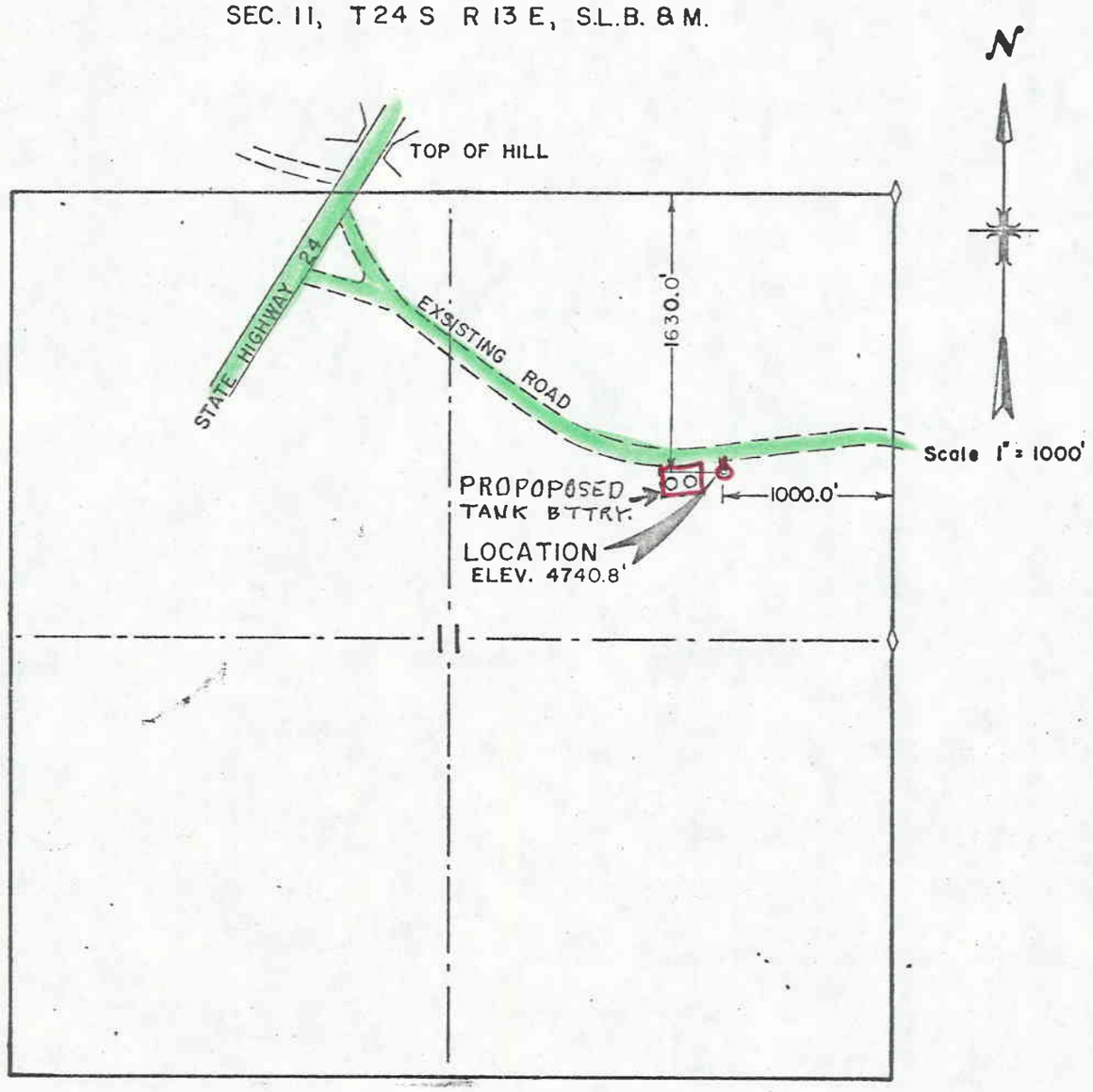
EXHIBIT H

Preliminary edition
Pending completion of 1 of
15 minute maps covering

WELL LOCATION

1630 FT. S.N.L.— 1000 FT. W.E.L.

SEC. 11, T 24 S R 13 E, S.L.B. & M.



I, Richard J. Mandeville do hereby certify that this plat was plotted from notes of a field survey made under my direct responsibility, supervision and checking on Nov. 12, 1973.

Richard J. Mandeville
Registered Land Surveyor

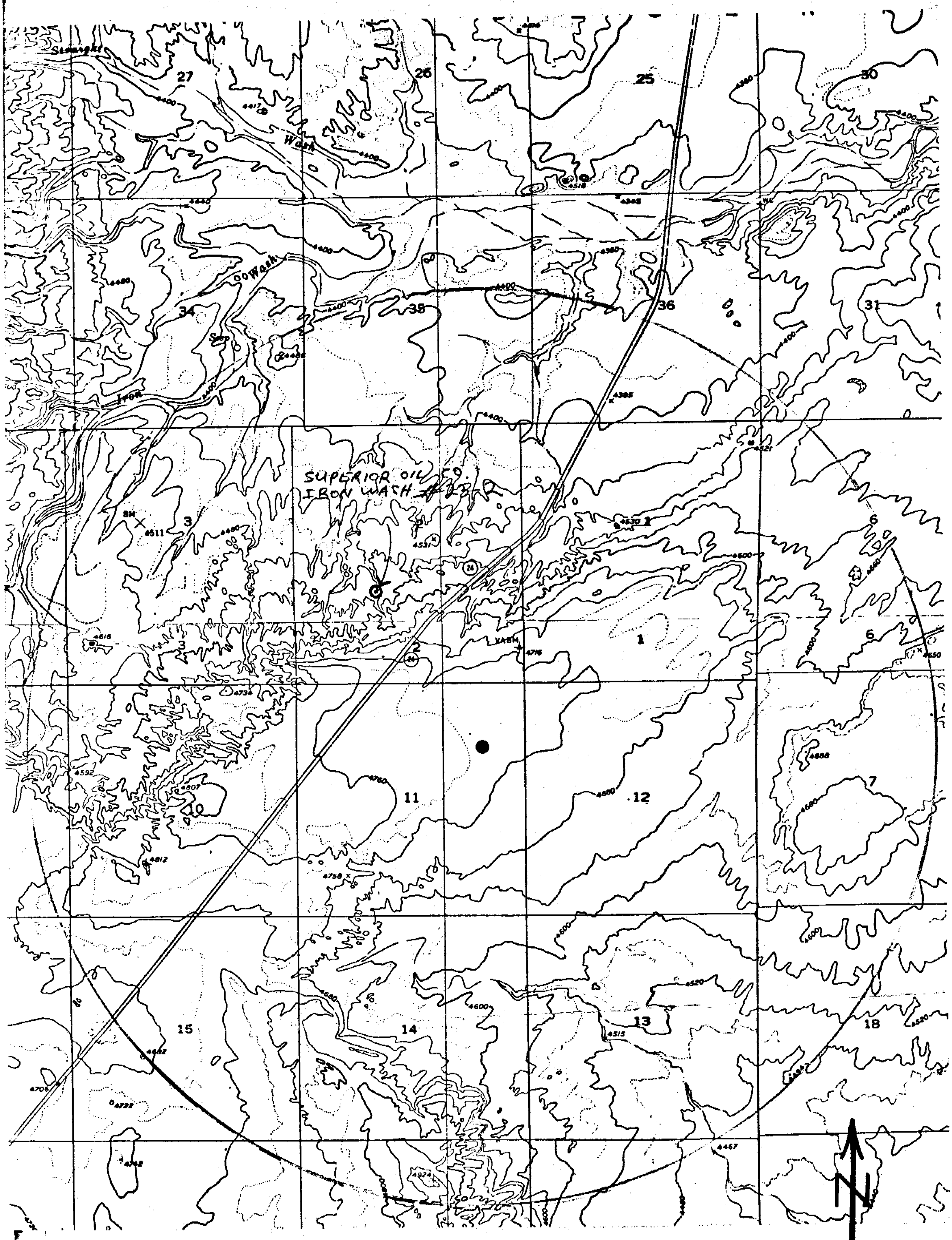
REVISED 11/30/73

WESTERN ENGINEERS, INC.
WELL LOCATION
TEXAS GAS EXP. CORP.
FED. 11-24-13
EMERY COUNTY, UTAH

SURVEYED D.B. DRAWN R.W.Q.

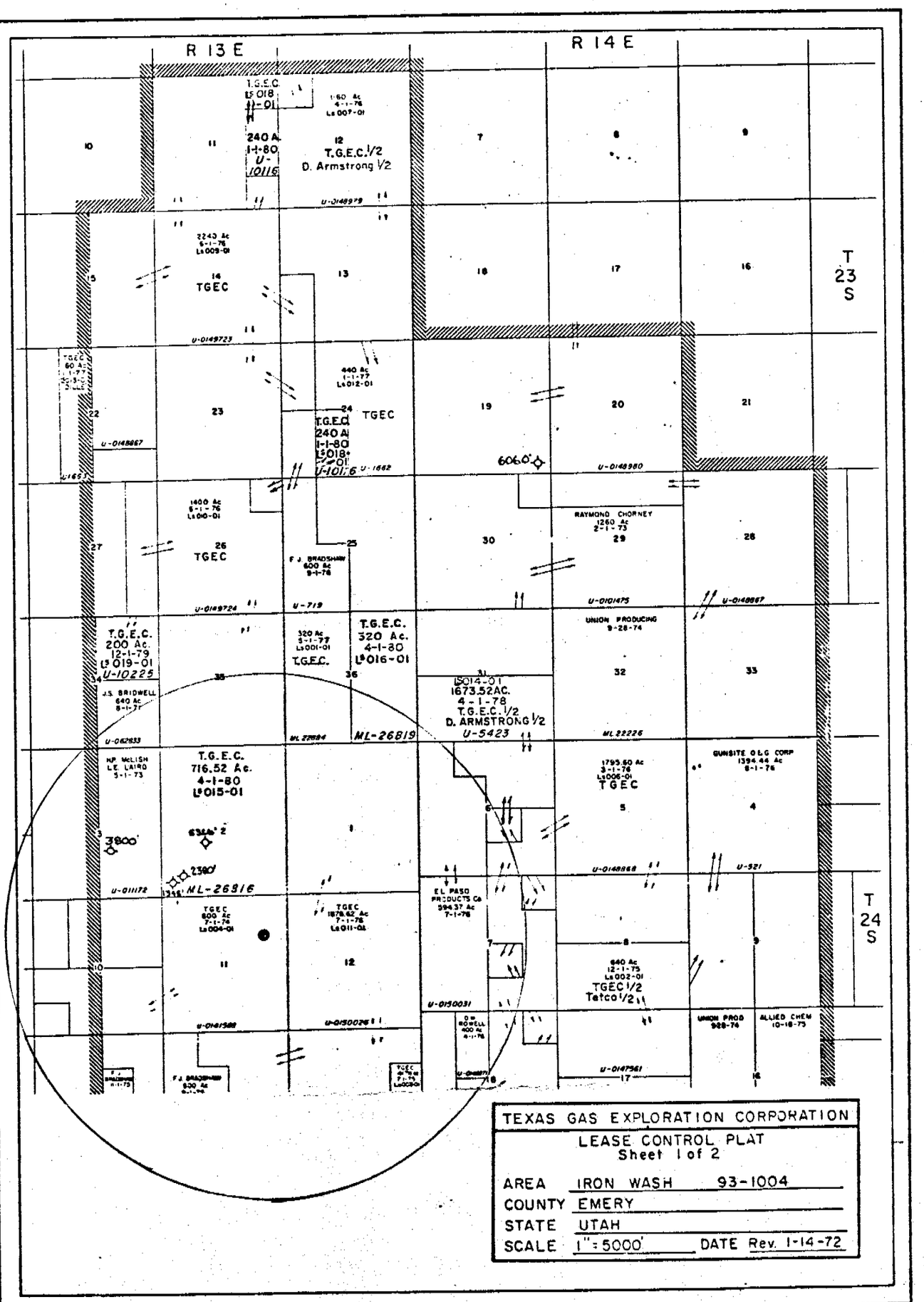
GRAND JUNCTION, COLO. 11/30/73

EXHIBIT III



Straight
Wash
Iron
Wash
SUPERIOR OIL CO.
IRON WASH #23-2
BM
4511
VABM
4716
27
26
25
30
34
35
36
31
3
2
1
6
10
11
12
7
15
14
13
18

EXHIBIT IV



TEXAS GAS EXPLORATION CORPORATION

LEASE CONTROL PLAT
Sheet 1 of 2

AREA IRON WASH 93-1004
COUNTY EMERY
STATE UTAH
SCALE 1" = 5000' DATE Rev. 1-14-72

EXHIBIT IV

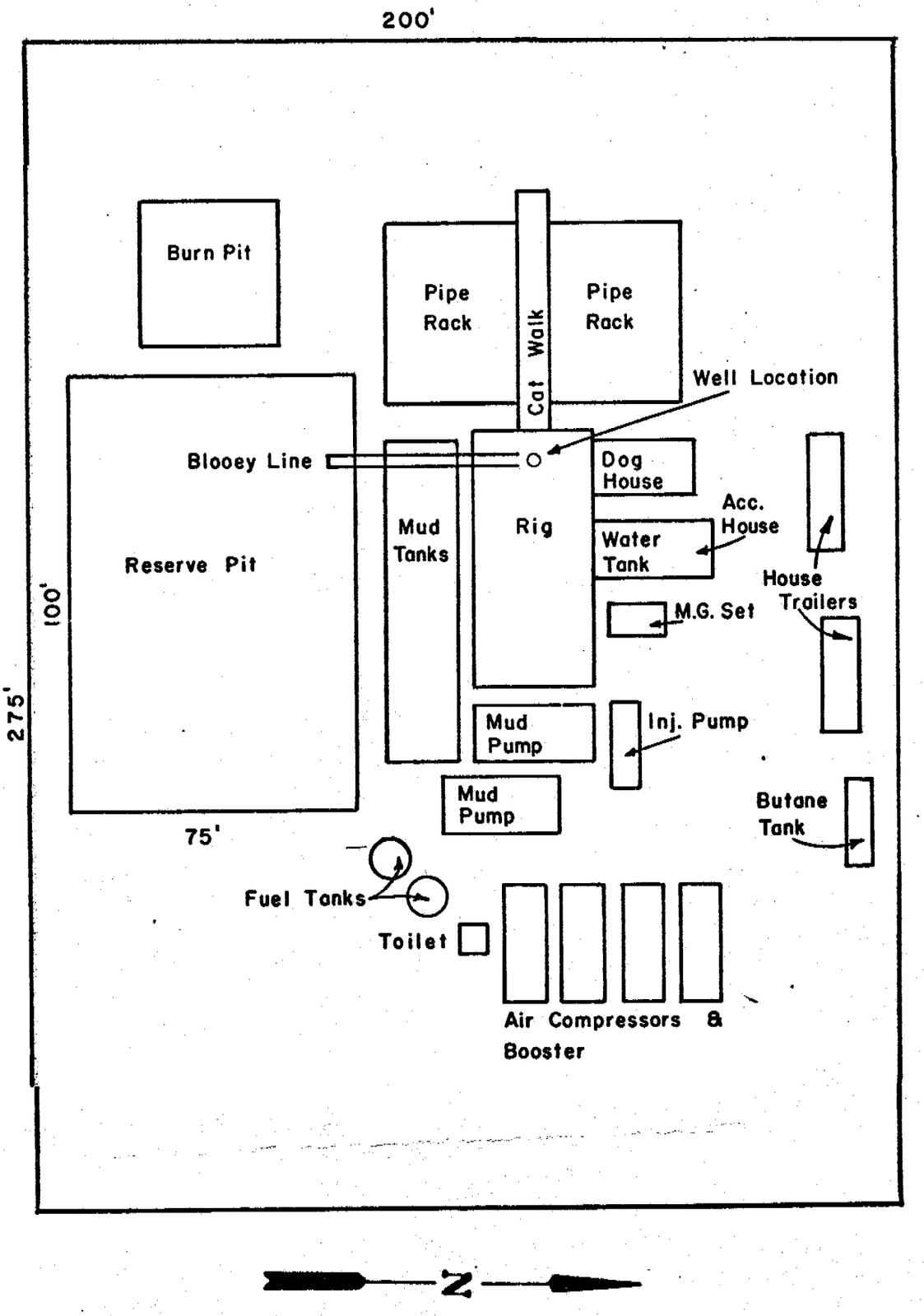

200'
Burn Pit
Pipe Rack
Cat Walk
Pipe Rack
Well Location
Blooey Line
Dog House
Acc. House
Mud Tanks
Rig
Water Tank
Reserve Pit
House Trailers
M.G. Set
100'
275'
Mud Pump
Inj. Pump
Mud Pump
Butane Tank
75'
Fuel Tanks
Toilet
Air Compressors & Booster
N

EXHIBIT VI

TEXAS GAS EXPLORATION CORPORATION

P. O. Box 52310 · Houston, Texas 77052 · 713/222-9481

Division of Texas Gas
Transmission Corporation

December 4, 1973

Utah Department of Natural Resources
Division of Oil and Gas Conservation
1588 West North Temple
Salt Lake City, Utah 84116

Re: Texas Gas Exploration Corporation
Federal Well No. 1
Campbell County, Wyoming

Gentlemen:

Relative to our application to drill the above captioned well, please find enclosed the following data:

1.) Copy of Federal Form 9-331C.

2.) Copy of Certified Location Plat.

If any additional information is required, please advise.

Very truly yours,

TEXAS GAS EXPLORATION CORPORATION

R. D. Benge
Administrative Manager

RDB/ts

Enclosures (3)

December 10, 1973

Texas Gas Exploration Corporation
Box 52310
Houston, Texas 77052

Re: Well No. Federal 11-24-13
Sec. 11, T. 24 S, R. 13 E,
Emery County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure. Said approval is, however, conditional upon the following:

(a) A letter forwarded to this office as to why this location, which is unorthodox under Rule C-3, was selected; and further a statement indicating that your company owns or controls all the acreage within a 660' radius of the proposed well site.

(b) It is recommended that a minimum of 150 feet of surface pipe be set, rather than the 100 feet indicated on your application.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PAUL W. BURCHELL - Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation relative to the above will be greatly appreciated.

The API number assigned to this well is 43-015-30017.

Very truly yours,

DIVISION OF OIL AND GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

CBF:sd
cc: U.S. Geological Survey

TEXAS GAS EXPLORATION CORPORATION

P. O. Box 52310 · Houston, Texas 77052 · 713/222-9481

Division of Texas Gas
Transmission Corporation

December 14, 1973

State of Utah
Department of Natural Resources
Division of Oil & Gas Conservation
1588 West North Temple
Salt Lake City, Utah 84116

RE: Well No. Federal 11-24-13
Sec. 11, T-24-S, R-13 E
Emery County, Utah

Gentlemen:

In reply to your letter of December 10, 1973, please be advised that subject well location, which is unorthodox under Rule C-3, was selected at the request of the U. S. Geological Survey and the U. S. Bureau of Land Management due to topographical reasons.

Also, please be further advised that Texas Gas Exploration Corporation hereby certifies that they own or control all the acreage within a 660' radius of the proposed well site.

Very truly yours,

TEXAS GAS EXPLORATION CORPORATION

R. D. Benge

R. D. Benge
Administrative Manager

CC: U. S. Geological Survey

RDB/eo

D. W. BOLYARD and ASSOCIATES
Petroleum Consultants

SUITE 710
1776 LINCOLN STREET
DENVER, COLORADO 80203
AREA CODE 303
TELEPHONE: 244-0521

GEOLOGIC REPORT

Texas Gas Exploration Corporation
Federal 11-24-13 No. 1

SE¼ NE¼ Section 11, Township 24 South, Range 13 East

Emery County, Utah

CONTENTS

SUMMARY

Well Name:	Texas Gas Exploration Corporation Federal 11-24-13 No. 1
Location:	SE¼ NE¼ Section 11, Township 24 South, Range 13 East Emery County, Utah
Area:	Iron Wash
Elevation:	4749 K.B.; 4740 G.L.
Total Depth:	4221 Driller; 4222 Schlumberger
Geologist:	D.W. Bolyard and Associates
Contractor:	Pease Drilling Company
Gas Logging:	Surface to total depth
Spud:	January 5, 1974
Completed:	January 29, 1974
Completion Status:	Dry and Abandoned
Casing:	156.08' of 8-5/8", 24# casing set at 167' K.B. with 125 sacks cement and 2% calcium chloride
Formation at T.D.:	Leadville Limestone (Mississippian) ?
Important Oil Shows:	Moenkopi and Coconino

GENERAL OBSERVATIONS

Samples were excellent. Rig operations were efficient.

FORMATION TOPS

	Samples	E - Log
Jurassic		
Entrada	surface	surface
Carmel	220	218
Navajo	485	486
Kayenta	920	922
Wingate	1242	1232
Triassic		
Chinle	1525	1526
Shinarump	1794	1793
Moenkopi	1859	1852
Sinbad	2304	2290
Permian		
Coconino	2444	2449
Organ Rock	3078	3077
Lower Carbonates	3222	3226
Pennsylvanian		
Hermosa (Paradox)	3566	3567
Mississippian		
Leadville Limestone (?)	4210	4210

CHRONOLOGICAL HISTORY

January 5, 1974	Spud. Drilled to 169'. Ran 8-5/8" new 24 lb. casing and cemented at 167' K.B. with 125 sacks regular cement with 2% calcium chloride.
January 6-8, 1974	Nippled up and drilled with air.
January 9-13, 1974	Drilling with air-mist. Hole started making water in Navajo. Water volume increased to an estimated 150 bbls. per hour.
January 14, 1974	Ran DST No. 1 (2090-2160) and resumed drilling with air-mist.
January 15-16,1974	Drilled to 2454', ran DST No. 2 (2447-2454), and resumed drilling.
January 17-27,1974	Drilled with aereated water to T.D. 4221'. Water volume increased to estimated 250 bbls. per hour in Coconino Sand.
January 27, 1974	Ran Electrical Logs.
January 28, 1974	Ran DST No. 3 (3812-3866); misrun.
January 29, 1974	Ran DST No. 4 (3814-3868). Plugged and abandoned.

SAMPLE DESCRIPTION

Depth	Description
	ENTRADA SANDSTONE
169 - 190	Sandstone, white to tan, with occasional black, red and pink grains, medium-grained, rounded to subrounded, quartzose, friable, no show.
190 - 220	Sandstone, as above, fine-to medium-grained; and some shale, green, silty, micaceous, gypsiferous (?).
	CARMEL FORMATION
220 - 290	Shale, red to grayish green, silty, partly micaceous; with some white gypsum.
290 - 330	Gypsum and anhydrite; with interbedded dolomite, gray to brown, partly anhydritic.
330 - 415	Shale, gray and dolomitic to reddish brown and gypsiferous, silty; interbedded with sandstone, white to pink and orange grains, very fine-to medium-grained, rounded, silty, friable.
415 - 470	Sandstone, as above; with interbedded siltstone, gray; shale; red, silty; and limestone, gray to brown and red, finely crystalline.
470 - 485	Siltstone, red, sandy, slightly calcareous, friable to firm.
	NAVAJO SANDSTONE
485 - 510	Sandstone, white with orange cast, fine-to medium-grained, subrounded, friable; with interbedded shale, dark gray and red, slightly silty; and a little white clay.
510 - 684	Sandstone, salmon pink to orange and some white, fine-to medium-grained, friable to firm.
684 - 778	Sandstone, as above but some darker salmon to orange red; with some coarse-grained to conglomeratic sandstone; and a few streaks of red siltstone.
778 - 800	Sandstone, as above; interbedded with siltstone, dark grayish red to white, slightly calcareous.
800 - 920	Sandstone, tan to salmon pink, very fine-to fine-grained, subrounded, with some coarse, rounded frosted grains; with traces of dark grayish red siltstone and dark greenish gray shale.

SAMPLE DESCRIPTION

Depth	Description
	KAYENTA FORMATION
920 - 930	Siltstone grading to very fine-grained sandstone, dark grayish red with some gray mottling, slightly calcareous, hard.
930 - 1000	Sandstone, light gray to white, tan and salmon pink, mostly very fine-to fine-grained with a little medium-grained (950-960'), subrounded; with interbeds of dark grayish red to greenish gray siltstone and shale.
1000 - 1030	Sandstone grading to siltstone, grayish red, very fine- to fine-grained, partly slightly calcareous; with traces of limestone, gray, earthy, anhydritic; and traces of light green shale and greenish gray, silty shale.
1030 - 1110	Sandstone, light gray to white and tan with some orange grains, very fine-to fine-grained; subrounded, partly anhydritic; with interbeds of red siltstone and pale green siltstone.
1110 - 1120	Sandstone, pale orange, very fine-to medium-grained, with rare coarse frosted grains.
1120 - 1130	Shale and siltstone, dark grayish red, sandy; with inter-bedded sandstone as above.
1130 - 1140	Dolomite, dark grayish red, medium-crystalline, argillaceous, sandy, grading to sandstone, trace of dead oil with no fluorescence or cut.
1140 - 1160	Sandstone, orange, very fine-to medium-grained, subrounded; with interbeds of siltstone, dark grayish red, anhydritic, grading to dolomitic sandstone; some dolomite as above; and a few thin beds of pale green shale.
1160 - 1220	Sandstone, tan to orange, very fine-to fine-grained, subrounded; with thin interbeds of red and green shale becoming more abundant downward.
1220 - 1242	Shale, dark brownish red, sandy; with some sandstone and a trace of anhydrite.
	WINGATE SANDSTONE
1242 - 1390	Sandstone, light brownish orange, fine-to very fine-grained, subrounded, very friable (all loose grains below 1350'); trace of dark gray limestone @ 1310-20'.

SAMPLE DESCRIPTION

Depth	Description
1390 - 1410	Sandstone, as above, with abundant coarse to medium, rounded, frosted grains.
1410 - 1420	Sandstone, like 1242-1390'; with 10% heavy black mineral.
1420 - 1500	Sandstone, orange brown to reddish brown and brownish orange, fine-to very fine-grained, subrounded, with some medium rounded frosted grains, with silty streaks, partly slightly calcareous, few ferruginous streaks.
1500 - 1525	Sandstone, light brownish orange, very fine-to fine-grained, subrounded, friable; with a trace of greenish gray siltstone @ 1500-1510'.
	CHINLE FORMATION
1525 - 1529	Shale grading to siltstone, dark red, sandy, finely micaceous; with traces of green, silty to sandy shale and light gray, fine-grained sandstone.
1529 - 1609	Siltstone, dark brownish red, sandy, partly dolomitic to anhydritic; interbedded with sandstone, light greenish gray to light gray, very fine-grained, slightly calcareous, tight; and shale, dark red, green and grayish green.
1609 - 1620	Sandstone, gray with some greenish cast, very fine-to medium-grained, calcareous, tight, interbedded with red shale with coarse, rounded frosted sand grains.
1620 - 1630	Siltstone, gray to reddish and brownish gray; grading to sandstone, calcareous, tight; with interbedded shale, grayish red, pale green and brown.
1630 - 1660	Sandstone, gray, very fine-grained, silty, calcareous; with interbeds of grayish red, grayish green and pale green shale.
1660 - 1670	Sandstone, gray with pink and green mottling, fine-to coarse-grained, conglomeratic, subrounded to subangular, calcareous, clay-filled, some low porosity, scattered dead oil stain but no fluorescence or cut.
1670 - 1692	Sandstone, gray to greenish gray, very fine-to coarse-grained, calcareous; with traces of gray limestone, green and red shale; traces of coal and gilsonite.

SAMPLE DESCRIPTION

Depth	Description
1692 - 1705	Conglomerate, gray to grayish red, granules and pebbles of gray limestone, shale and coal, calcareous, clay-filled, tight, minor dead oil stain with no fluorescence or cut.
1705 - 1747	Limestone, light gray to greenish gray, finely-crystalline to dense, dolomitic; interbedded with varicolored (greenish gray, green, lavender and dark red) shale and siltstone.
1747 - 1794	Siltstone, shale and sandstone, varicolored as above, becoming carbonaceous downward, with traces of dolomite.
	SHINARUMP MEMBER OF CHINLE FORMATION
1794 - 1803	Shale, dark brownish red and greenish gray to grayish green; with interbedded sandstone, white to light gray, medium-to coarse-grained, subangular to subrounded, slightly calcareous, partly clay-filled, medium porosity, abundant soft, tarry globules in pore spaces, trace very weak fluorescence and pin-points of bright gold fluorescence, weak to good cut; trace of coal.
1803 - 1835	Sandstone, white to light gray, medium-to coarse-grained, conglomeratic with subangular pebbles of gray shale and limestone, pyritic, partly siliceous, partly clay-filled, medium to low porosity, abundant specks of tar near top, pin-points of dull gold fluorescence with no cut.
1835 - 1845	Shale, dark greenish gray, silty, slightly carbonaceous; and sandstone, as above.
1845 - 1859	Sandstone, light gray, fine-to coarse-grained, angular to rounded, slightly calcareous, partly clay-filled, tight to medium porosity, abundant tar specks and trace of dull gold fluorescence; interbedded with shale and siltstone, as above.
	MOENKOPI FORMATION
1859 - 1909	Siltstone, greenish gray to light gray, dolomitic, pyritic; with interbedded shale, greenish gray.
1909 - 1925	Siltstone, as above; with some gray, microcrystalline dolomite.
1925 - 1956	Dolomite, greenish to olive gray, microcrystalline, argillaceous, pyritic; with some siltstone grading to sandstone, as above.

SAMPLE DESCRIPTION

Depth	Description
1956 - 2008	Siltstone and shale interbedded, greenish gray to light gray, dolomitic, slightly pyritic; with interbeds of dolomite, greenish to olive gray, microcrystalline, argillaceous, grading to limestone.
2008 - 2035	Shale, greenish gray, dolomitic, pyritic; with interbeds of siltstone, very fine-grained dolomitic with very dark brown oil saturation in 5% to 20% of sample, no fluorescence, slight cut, and no measureable gas.
2035 - 2075	Siltstone, greenish gray, dolomitic, pyritic; with interbedded dolomite, gray to greenish gray, very finely- to finely crystalline, partly sucrosic; and shale, as above; fair to weak oil odor and 20% to 40% of sample is saturated with oil as above, mostly no fluorescence but good fluorescent brown cut, no measureable gas.
2075 - 2090	Siltstone and shale, as above, with 15% to 40% oil saturation, bleeding a little dark brown oil; spotty faint yellow mineral fluorescence, fair brown cut, no gas.
2090 - 2110	Siltstone and shale, as above, with 40% to 60% dark brown oil saturation, abundant bleeding of dark brown oil, scattered dull yellow fluorescence on grayish green shale yielding a quick tan cut with gold fluorescence suggests fractures; no gas.
2110 - 2130	Siltstone, as above, grading to very fine-grained sandstone, and shale as above, with 70% to 75% oil saturation, and 15% dull yellow fluorescence on shale yielding quick cut like 2090-2110'; no gas.
2130 - 2155	Siltstone and shale, as above, with 15% to 30% oil saturation and 10% to 15% dull yellow fluorescence on shale yielding cut as above; no gas.
2155 - 2160	Siltstone and shale, as above, with 70% oil saturation and profuse bleeding of very dark brown oil; no gas.
2160 - 2230	Siltstone and shale, as above, with 20% to 70% oil saturation, some profuse bleeding, traces to no fluorescence; no gas.
2230 - 2270	Siltstone and shale, as above, with traces of loose, fine-grained, subrounded sand, with 50% to 90% oil saturation, bleeding oil profusely, traces to no fluorescence; no gas.

SAMPLE DESCRIPTION

Depth	Description
2270 - 2304	Siltstone and shale, as above, with traces of loose sand as above, small quartz pebble @ 2280-2290'; and thin interbeds of dolomitic limestone and dolomite, light gray to greenish gray (trace white, dense dolomite @ 2290-2300'), very finely-crystalline, low porosity, with 30% to 90% oil saturation, bleeding oil, 15% fluorescence on green shale near base (slight cut as above).
	SINBAD LIMESTONE
2304 - 2330	Dolomite and dolomitic limestone, light gray to gray and brownish gray, finely-to very finely-crystalline and dense, minor calcarenite, argillaceous, some pseudo-oolites near base, abundant pin-point pores and some small vugs, partly tight, some anhydrite in-filling near top, uneven dark brown oil saturation, some bleeding of very dark brown oil, trace to 5% dull yellow fluorescence (mostly no fluorescence), no gas.
2330 - 2343	Shale and siltstone, dark grayish green,with streaks of dolomitic limestone, 70% oil saturated, 10% dull yellow fluorescence yielding light brown cut, no gas.
2343 - 2352	Shale and siltstone, as above, grading to very fine-grained sandstone, with 30% solid to streaky oil saturation, some pieces bleeding profusely, no fluorescence; with some dolomitic limestone, gray, fine-to very finely-crystalline, pyritic, spotty to solid oil saturation, no fluorescence; no gas.
2352 - 2362	Limestone, tan to brown and greenish gray, finely-to very finely-crystalline, dolomitic, pyritic, low to medium porosity, even to spotty dark brown oil saturation, partly not stained; and dolomite, gray to greenish gray, silty, pyritic, spotty dark brown oil saturation; with a little shale, grayish green, dolomitic, pyritic; no gas.
2362 - 2367	Shale and siltstone, greenish gray, dolomitic, pyritic; grading to dolomite, very finely crystalline; with spotty dark brown oil stain on dolomite and solid oil saturation in siltstone; no gas.
2367 - 2392	Dolomite, greenish gray to tan, very finely-crystalline, partly sucrosic, partly dense, argillaceous, pyritic; with interbedded shale as above; with 20% to 30% dark brown oil saturation, bleeding oil from pin-point pores, no fluorescence, no gas.

SAMPLE DESCRIPTION

Depth	Description
2392 - 2416	Dolomite, dark gray to brown, microcrystalline, pyritic, partly saturated with oil as above (partly not stained), no fluorescence; and abundant shale interbeds.
2416 - 2444	Dolomite, dark gray, brown and greenish gray, finely-crystalline to microcrystalline, partly argillaceous, pyritic, medium porosity at top, tight below, saturated with very dark brown oil, trace dull yellow fluorescence; with interbeds of shale and a trace of sandstone, very fine-grained, calcareous, tight, with dead oil stain; no gas.
	COCONINO SANDSTONE
2444 - 2450	Sandstone, light gray, fine-to medium-grained with some coarse frosted grains, poorly sorted, subrounded, partly tight, some fair porosity, abundant brown oil stain, some pieces bleeding very dark brown oil, few unstained spots, no fluorescence, weak light brown cut; no gas.
2450 - 2455	Sandstone, as above, with uneven stain and bleeding black oil; partly fair porosity with uniform brown oil stain, weak yellow fluorescence and instantaneous light brown cut and residue; no gas.
2455 - 2458	Sandstone, as above, mostly unstained, numerous globules of very dark brown to black oil, few specks of gold fluorescence, strong cut, looks wet; no gas.
2458 - 2460	Sandstone, as above, with light to dark brown oil stain, numerous globules and specks of black oil, few specks and streaks of gold fluorescence, fair cut, looks wet; no gas.
2460 - 2470	Sandstone, gray, fine-to medium-grained, subrounded, calcareous, low porosity, spotty dead oil stain, abundant pin-points of dead oil, no fluorescence, fair cut, no gas.
2470 - 2490	Sandstone, as above, with traces of red and green shale; abundant dead oil, no fluorescence or gas.
2490 - 2510	Sandstone, gray, medium-to coarse-grained, subrounded, calcareous, low porosity, with abundant dark brown to black dead oil stain and spotty tar saturation, with trace to 20% spotty bright yellow fluorescence associated with light brown stain; no gas.
2510 - 2520	Sandstone, gray to brown, fine-to medium-grained, subrounded, calcareous, medium porosity, with abundant dead oil stain and bleeding heavy black oil, 5% dull yellow fluorescence; and trace of red shale.

SAMPLE DESCRIPTION

Depth	Description
2520 - 2540	No samples.
2540 - 2600	Sandstone (mostly loose grains), gray to light gray, fine-to medium-grained, subrounded, moderately well sorted, calcareous, probably high porosity, abundant dead oil residue and tar specks at top (decreasing downward); with traces of shale, red and greenish gray; and abundant white clay with black slickensides.
2600 - 2680	Sandstone, like 2540-2600', light gray to white, pyritic; with traces of red, dark greenish gray and dark gray shale; and abundant white clay with black slickensides.
2680 - 2700	Sandstone, white, medium-grained, less calcareous, tighter, with some black tar; slight increase in shale, red and green, silty, dolomitic, fissile.
2700 - 2720	Sandstone, like 2680-2700', but only a trace of tar.
2720 - 3078	Sandstone (mostly loose grains), light gray to white, very fine-to medium-grained, moderately well to poorly sorted, subrounded to subangular, mostly slightly calcareous, traces of fine pyritic; with partings and very thin beds of shale, red, greenish gray, brown and very dark gray to black; abundant white clay with black slickensides.
	ORGAN ROCK TONGUE of CUTLER FORMATION
3078 - 3095	Dolomite grading to limestone, light gray to tan and pinkish orange, finely-crystalline to dense; with interbeds of shale, grayish green to dark red, slightly dolomitic.
3095 - 3150	Sandstone, gray to tan, very fine-to very coarse-grained, partly conglomeratic, poorly sorted, subangular to subrounded, dolomitic, mostly friable, probably low porosity, with traces of possible light brown oil stain, dull yellow fluorescence, and very faint milky cut in bottom 20 feet; interbedded with shale, dark red to maroon and grayish green to dark gray, silty; abundant white clay with slickensides.
3150 - 3182	Siltstone grading to very fine-grained sandstone, tan, slightly conglomeratic, dolomitic, tight; interbedded with shale, maroon, trace dark greenish gray, dolomitic; abundant white dolomitic clay with slickensides.

SAMPLE DESCRIPTION

Depth	Description
3182 - 3210	Shale, dark red to dark grayish red and maroon, silty, micaceous, slightly dolomitic; with interbeds of sandstone, reddish orange, tan and gray, very fine-to coarse-grained, finely conglomeratic, silty, subrounded to subangular, low porosity; and some dark greenish gray, micaceous shale.
3210 - 3222	Shale, red as above, with rounded to angular pebbles of dolomite (cream, tan, greenish gray and dark gray).
	LOWER PERMIAN CARBONATES
3222 - 3224	Dolomite, white, dense to finely-crystalline, very low porosity; trace of dead oil stain, no fluorescence, very faint cut.
3224 - 3245	Dolomite, white, dense to finely crystalline, very low porosity; with partings of shale, dark greenish gray to red.
3245 - 3247	Sandstone, white, very fine-to fine-grained, quartzitic; with shale, as above.
3247 - 3285	Dolomite, white to gray and tan, pink, brownish orange and red, finely-crystalline to dense, silty, partly argillaceous, anhydritic, traces of glauconite, probably very low porosity; with partings of shale, red and grayish green to very dark gray, silty, micaceous.
3285 - 3287	Sandstone, white, very fine-grained, dolomitic, tight; and shale, mostly red.
3287 - 3343	Dolomite, light gray to white and tan, dense to finely-crystalline, with traces to 15% orange chert, traces of anhydrite, mostly tight, with traces of dead oil stain @ 3310-3330'; with partings of shale, as above, trace black shale @ 3320-3330'; and traces of sandstone, white, very fine-grained, subrounded, tight.
3343 - 3384	Dolomite, as above and brownish gray, lavender and greenish yellow; with traces to 20% chert, orange, gray to light gray, tan and clear to milky; and thin beds of quartz sand, siltstone, dark gray to black shale and varicolored shale; traces of dead oil residue.
3384 - 3389	Siltstone grading to sandstone, gray, very fine-grained, dolomitic, tight.
3389 - 3398	Dolomite, white to gray and tan, dense to finely-crystalline; with red, orange and tan chert.
3398 - 3406	Siltstone, orange-red to gray, chloritic, shaly.

SAMPLE DESCRIPTION

Depth	Description
3406 - 3420	Dolomite, white to tan, dense to very fine-crystalline, trace of dead oil in vug; with thin beds and partings of shale, red,greenish gray and dark gray to black.
3420 - 3477	Siltstone grading to sandstone, light to dark gray with red ferruginous stains, very fine-grained, dolomitic, chloritic, shaly; and interbeds of cherty dolomite, as above.
3477 - 3487	Dolomite, white to gray, tan and pink, dense to very finely-crystalline, anhydritic, stylolitic, with tan chert.
3487 - 3520	Sandstone, light gray to brownish gray, very fine- to medium-grained, partly argillaceous, partly iron-stained, slightly dolomitic, chloritic, tight; with interbeds of siltstone, tan to dark gray, greenish gray and brownish red; varicolored shale; and dolomite, white to tan, pink and gray.
3520 - 3550	Dolomite, light gray to tan, very fine-to medium-crystalline, very anhydritic, trace of salt; with partings of very dark gray to black shale as above. Sample mostly powder.
3550 - 3561	Sand (mostly loose), reddish brown, very fine-to fine-grained, subrounded, very micaceous, few clusters of tight sandstone; with a few thin beds of shale, red and grayish green.
3561 - 3566	Siltstone, dark greenish gray, micaceous, dolomitic, hard.
	HERMOSA (PARADOX) FORMATION
3566 - 3583	Dolomite, brown, light gray and pink, dense to finely-crystalline, partly tight, some vugular porosity, anhydritic, with spotty black dead oil residue, extremely weak dull fluorescence and possible very faint cut; with interbedded sandstone, gray to light gray, very fine-grained, low porosity, trace of dead oil stain; and trace of red and green shale.
3583 - 3595	Siltstone grading to sandstone, as above, and some greenish gray and dark grayish to reddish brown, with spotty dead oil stain; with some shale, red and dark greenish gray, silty; and a little dolomite, dark brownish gray to lavender, anhydritic.

SAMPLE DESCRIPTION

Depth	Description
3595 - 3630	Limestone, white to gray and tan, dense to coarsely-crystalline, partly chalky, anhydritic, rare faint oolites, few indistinct fossils, probably low porosity; with 30% brown, black and orange chert at base, containing preserved fossil (coralline ?) structures; with a little pink dolomite at top; and interbeds of siltstone, dark red,greenish gray and brown, micaceous, dolomitic; and shale, dark to very dark gray, silty, micaceous, calcareous.
3630 - 3635	Dolomite, light gray, fine-to very finely-crystalline, silty, some chert, anhydritic, low porosity to tight.
3635 - 3646	Siltstone grading to very fine-grained sandstone, as above; with a little cherty dolomite and limestone.
3646 - 3660	Dolomite, pink, very fine-to finely-crystalline; limestone, light gray to tan, very finely-crystalline; with interbedded red to greenish gray shale and siltstone; trace of yellowish coating resembling carnotite on dolomite and limestone.
3660 - 3700	Dolomite with a little limestone, tan to white, fine-to medium-crystalline, anhydritic, possible good porosity suggested by fine (powder) texture of sample.
3700 - 3706	Dolomite and limestone, as above, with abundant orange to tan chert.
3706 - 3711	Limestone, white to gray, very fine-to medium-grained, anhydritic, abundant yellow stains, some pin-point pores and a few vugs with dead oil stain; chert, milky to tan and orange.
3711 - 3715	Shale, red and greenish gray to dark gray, silty, dolomitic.
3715 - 3745	Limestone, white to gray, dense to medium-grained, traces coarse-grained, partly argillaceous to silty, yellow stains and a little orange chert at top, low porosity; with some red, green and dark gray shale and gray siltstone near base.
3745 - 3767	Limestone, white to gray, dense to fine-grained, rare fossil structures, anhydritic, with orange chert, trace of dead oil stain; with a little red, green and dark gray shale and siltstone.

SAMPLE DESCRIPTION

Depth	Description
3767 - 3798	Limestone, white to light gray, dense to fine-grained, slightly anhydritic, few indistinct fossils (algal ?) and traces of glauconite near base; with 30% chert, predominantly orange, some yellow, tan and milky; and thin interbeds of siltstone and shale, as above.
3798 - 3808	Limestone, as above; with shale and siltstone, green, glauconitic and red; chert, red and orange.
3808 - 3833	Dolomite, salmon pink, becoming light gray downward, fine-to very finely-crystalline, indistinct fossil structures, anhydritic, low porosity at top becoming medium to excellent vugular porosity near base; traces of dead oil in vugs. In one speciman, a vug is lined with dead oil separating dolomite from anhydrite infilling.
3833 - 3841	Dolomite, as above but less porous; with orange chert and streak of dark greenish gray shale.
3841 - 3851	Dolomite, pink and light gray to white, very fine- to finely-crystalline, abundant pores and small vugs, partly filled with anhydrite.
3851 - 3861	Dolomite, as above, pink decreasing, pores and small vugs common but less abundant, trace dead oil stain; trace of shale.
3861 - 3876	Dolomite, tan, dense to finely-crystalline, anhydritic, tight, with some white to milky chert.
3876 - 3898	Dolomite, light gray and tan with some pink at top, very fine-to finely-crystalline, anhydritic, low porosity.
3898 - 3945	Siltstone, dark gray to white, grading to very fine-grained sandstone, dolomitic, partly glauconitic, tight; with shale, dark greenish gray, some red in lower part; interbedded with dolomite, as above, with traces of tar and dead oil stain in vugs.
3945 - 3960	Dolomite, brown and light gray, dense to finely-crystalline, traces algal (?) material, one fossil cast consisting of gray, sandy, calcareous clay; interbedded with shale, red and grayish green, silty, partly micaceous; and traces of black shale and siltstone.

SAMPLE DESCRIPTION

Depth	Description
3960 - 3975	Dolomite, as above and chalky; siltstone, white to light gray, gray and greenish gray; shale, red and green with trace of black; and clay (?), light colored; sample texture is very fine (powder).
3975 - 3990	Dolomite, white, fine-to very finely-crystalline, low intergranular porosity, high vuggy porosity.
3990 - 3996	Dolomite, white to gray and tan with a trace of pink, fine-to very finely-crystalline (trace of coarse), trace of dead oil on vug; with a little siltstone, gray, dolomitic.
3996 - 4031	Dolomite, as above, with traces of microfossils, partly anhydritic, medium to low vugular porosity; with thin interbeds of gray siltstone and red and green shale.
4031 - 4044	Dolomite, light gray and tan, very finely-crystalline to chalky,slightly anhydritic; sample texture is very fine (powder).
4044 - 4074	Dolomite, white to tan and pink, dense to medium-crystalline and chalky, partly silty, anhydritic, some poorly preserved microfossils, low porosity to tight; with shale, red and dark brownish to dark grayish red (some yellow mottling) and greenish gray, silty, calcareous to dolomitic; and traces of siltstone; sample texture is very fine (powder).
4074 - 4088	Dolomite, as above; with more abundant shale, red and green, trace of black; sample texture is very fine (powder).
4088 - 4100	Dolomite, as above, with a trace of brownish red to pink, more chalky; and shale, red, green and black; with some loose sand, very fine-grained to silt, rounded, some iron stain; sample texture is very fine (powder).
4100 - 4108	Dolomite, white to light gray and tan, chalky to finely-crystalline, silty, anhydritic, trace of faint oolites; trace of pink dolomite; trace of brownish red dolomite with disseminated red clay; with interbedded shale, mostly red and green, trace of brown with red mottling, trace of yellow and lavender mottling, trace of black, trace of fine pyrite.

SAMPLE DESCRIPTION

Depth	Description
4108 - 4119	Siltstone, light gray to white, coarse, rounded to subrounded, dolomitic; and dolomite, as above; and shale, red, green, gray and trace of black, mostly chunky; with a trace of sandstone, fine-grained, orange-red iron stain.
4119 - 4168	Dolomite, white to tan with a trace of pink at top, very fine-to medium-crystalline, anhydritic; with siltstone, as above; orange-red iron stains common; some red silty clay and dead oil stain near base.
4168 - 4191	Dolomite, light gray to tan and pink,very finely-crystalline, anhydritic, iron stains, red clay filling vugs and disseminated; with shale, dark red, grayish green and trace of lavender, silty; with a little siltstone, light gray, tight; and a trace of fine-grained sandstone and loose sand.
4191 - 4198	Silt, reddish brown; with dolomite and shale as above; abundant orange-red iron stains on dolomite.
4198 - 4210	Dolomite, white to light gray, tan and reddish gray to purple, fine-to medium-crystalline, partly argillaceous, anhydritic (this dolomite is different from all shallower dolomites); with shale, dark grayish red and grayish green; and abundant silt, as above.
	MISSISSIPPIAN - LEADVILLE LIMESTONE (?)
4210 - 4221	Dolomite, white to light gray, fine-to very finely-crystalline, anhydritic, few iron stains, trace of glauconite; trace of black, insoluble soot-like material; and white clay with orange-red slickensides.

DRILL STEM TESTS

DST No. 1 2090 - 2160

Tool open 10 minutes, shut in 60 minutes, open 45 minutes, shut in 90 minutes.

Blow: Preflow opened with strong blow, increasing to very strong in one minute; died in four minutes. Reopened tool for final flow with weak blow increasing to strong in four minutes; died in eight minutes.

Recovery: 10 feet of drilling water.

Pressures:

IHP	727 psi
FHP	727 psi
IFP	41-41 psi
FFP	41-21 psi
ISIP	41 psi
FSIP	21 psi

Sample Chamber: 2200 cc water with Rw = 0.68 @ 80 degrees (equiv. 8000 ppm chloride)

DST No. 2 2447 - 53½

Tool open 10 minutes, shut in 60 minutes, open 30 minutes, shut in 60 minutes.

Blow: Open with weak blow, increasing to moderate blow in two minutes, declining to weak at end of 10 minutes; reopened for final flow with weak intermittent blow, died in three minutes.

Recovery: 20 feet clear water.

Pressures:

IHP	877 psi
FHP	877 psi
IFP	7-4 psi
FFP	4-4 psi
ISIP	4 psi
FSIP	4 psi
BHT	90 degrees

Sample Chamber: 2200 cc clear water with Rw = 0.37 @ 48 degrees (equiv. 22,000 ppm chloride) Measurement questionable, as water tasted fresh.

DST No. 3 3812 - 3866: Misrun

DST No. 4 3814 - 3868

Tool open 10 minutes, shut in 60 minutes, open 60 minutes, shut in 120 minutes.

Blow: Open with strong blow. Reopened with strong blow which remained strong to end of flow period.

DRILL STEM TESTS

DST No. 4 3814 - 3868 (continued)

Recovery: 2825 feet clear fresh water (Rw = 2.2 @ 59 degrees, equiv. 3000 ppm).

Pressures:

	Top Recorder	Bottom Recorder
IHP	1503	1521
FHP	1503	1521
IFP	62-401	198-434
FFP	407-1192	576-1238
ISIP	1487	1481
FSIP	1480	1491
BHT	110 degrees F.	

Top packer held OK. Bottom packer backed throughout test.

Sample Chamber: 2500 cc clear water with Rw = 2.0 @ 64 degrees (equiv. 3200 ppm).

MUD GAS DETECTION

Returns of air, mist and water were monitored for the presence of combustible gas from the surface casing to total depth with equipment rented from Tooke Engineering Company.

The equipment was not operating properly from 3620 to 3840 feet.

No shows of gas were detected.

ELECTRICAL LOG CALCULATIONS

Depth	Cross Plot		Rw	Sw	Production
580 - 620	21.5 - 22	Sd	3.0	100	Water
1794 - 1806	11 - 13	Ls - Sd	1.7	100	Water
1810 - 14	12.5	Ls - Sd	1.7	100	Water
1816 - 23	14.5 - 16.5	Ls - Sd	1.7	100	Water
2102 - 10	7 - 7.5	Dol	1.7	---	Tight
1116 - 21	7	Dol	1.7	---	Tight
2176 - 82	8.5	Shaly Dol	1.7	90	Water
2184 - 94	12 - 12.5	Shaly Dol	1.7	100	Water
2228 - 40	9 - 10	Dol	1.7	85	Water
2253 - 56	7	Dol	1.7	---	Tight
2264 - 72	3	Dol	1.7	---	Tight
2290 - 2300	10.5 - 13.5	Dol	1.7	80-100	Water
2300 - 2306	9 -10	Dol	1.7	100	Water
2310 - 16	5 - 5.5	Dol	1.7	---	Tight
2316 - 20	0	Dol	1.7	---	Tight
2398 - 2406	8 - 6.5	Dol	1.7	70	Water
2423 - 31	6.5 - 8	Dol	1.7	---	Tight
2457 - 60	6.5	Sd	1.7	---	Tight
2466 - 68	6	Sd	1.7	---	Tight
2476 - 87	8.5 - 10	Sd	1.7	56	Oil & Water
2496 - 2500	10	Sd	1.7	40	Oil
2509 - 2524	5.5 - 6.5	Sd	1.7	---	Tight
2530 - 2890	11	Sd	1.7	100	Water
2890 - 98	0	Ls	1.7	---	Tight
2898 - 3020	9.5 - 11.5	Sd	1.7	100	Water
3028 - 76	10.5	Sd	1.7	80	Water
3571 - 73	4	Dol	1.7	---	Tight
3746 - 58	0	Ls	1.7	---	Tight
3784 - 94	5.5	Dol	1.7	---	Tight
3830 - 40	16 - 16.5	Dol	1.7	45	Oil
3848 - 56	12.5	Dol	1.7	52	Oil
3872 - 78	4 - 3	Dol	1.7	---	Tight
3985 - 94	4 - 6.5	Dol	1.7	---	Tight
4007 - 10	5.5	Dol	1.7	---	Tight
4148 - 52	5	Dol	1.7	---	Tight

GEOLOGICAL DISCUSSION

The well was structurally lower than the Superior dry hole in NE¼ SW¼ Section 2, Township 24 South, Range 13 East. Relative structural positions at selected horizons are as follows:

Horizon	TGEC	Superior	Difference
Navajo	486 (+4263)	225 (+4308)	45 feet
Chinle	1526 (+3223)	1263 (+3270)	47 feet
Coconino	2448 (+2301)	2200 (+2333)	32 feet
Organ Rock	3077 (+1672)	2830 (+1703)	31 feet
Lower Permian	3226 (+1523)	2959 (+1574)	51 feet
Hermosa	3568 (+1181)	3283 (+1250)	69 feet
Marker	3808 (+941)	3543 (+990)	49 feet
Marker	3966 (+783)	3741 (+792)	9 feet
Leadville (?)	4210 (+539)	3773 (+760)	221 feet

A reverse fault was cut in the lower part of the well. The distinctive Gamma Ray marker which was first encountered at 3966 feet was repeated at 4102 feet and again at 4150 feet. A nearly vertical fault is suggested by the presence of abundant white clay with black slickensides in the Coconino Sandstone. Throw on the fault is at least 180 feet. It could be greater since evidence regarding the nature of the Pennsylvanian - Mississippian (?) contact is conflicting. The lithology suggests unconformity, byt clay bearing slickensides suggests faulting.

The only important shows of oil were in the Moenkopi and the top few feet of the Coconino. Both were drill stem tested and determined to be without effective primary porosity. The Moenkopi oil was of low gravity, resembling that in the Superior well (retorted oil = 27 degrees API).

Drill stem test pressure build-up curves indicate that the porous dolomite from 3830-56' is an attractive reservoir for future exploration. Traces of dead oil in vugs coupled with fresh water suggest that exploration for Hermosa (Paradox) carbonates should be concentrated in more basinward localities.

BIT RECORD

No.	Size	Type	Depth Out	Feet	Hours
1	12¼	Retip	148	148	10¼
2	11	Rerun	169	169	3
1	7-7/8	Y31GJ	438	290	19
2	7-7/8	F52J	1709	1271	79¼
3	7-7/8	F62J	2850	1141	93
4	7-7/8	F62J	3292	442	54
5	7-7/8	ε31GJ	3292	Ream	Ream
6	7-7/8	F72J	3945	653	653
7	7-7/8	RR#2	4221	276	34

DEVIATION

Maximum Deviation 2½ degrees @ 1308 feet.

By: Dudley W. Bolyard

Dudley W. Bolyard

ORAL APPROVAL TO PLUG AND ABANDON WELL

Operator Texas Gas Exploration Representative Mr Douglas

Well No. 1-Fed 11 2413 Located SE ¼ NE ¼ Sec. 11 Twp. 24S Range 13E

Lease No. U 0141568 Field W.C. Emery Co State ~~Utah~~ Utah

Unit Name and Required Depth None Base of fresh water sands Wingate.

T.D. 4222 Size hold and Fill per Sack 7 7/8 " ' Mud Weight and Top 9.0 #/Gal. '

Casing Size	Set At	Top of Cement	To Be Pulled
8 5/8	156	Circ	None

Formation	Top	Base	Shows
Carmel	220		
Navajo	485		
Wingate	1242		
Chinle	1525		
Shinarump	1794		
Moenkopi	1859		
Sinbad	2304		
Coconino	2444		
Organ Rock	3078		
Permgan Dol.	3222		
Hermosa	3566		
Mississippian	4213		

Plugging Requirements

From	To	Sacks Cement
3100 - up		35 sx
2450	up	35 sx
1550	up	35 sx
150	up	35 sx
10 sx	w/ marker.	

Remarks

DST's, lost circulation zones, water zones, etc. DST 2090-2160 15' water

DST 2497-2959 20' water - Navajo fresh water bearing - Wingate ~~xx~~ fresh water

Approved by [signature] Date 1-27-74 Time 3:30 ~~A.M.~~ P.M.

STATE DIV. O & G CONS. - BURCHELL

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other BLM water well

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR: Texas Gas Exploration Corporation

3. ADDRESS OF OPERATOR: P.O. Box 52310, Houston, TX 77052

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1630' FNL & 1000' FEL Sec. 11 (NW SE NE)
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.: U-0141568

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: TGEC-FEDERAL 11-24-13

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 11, T24S, R13E

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
	12-17-73	Emery	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
1-6-74	1-26-74	P & A 1-29-74	GR. 4740.2'	4741.2'

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
4224'	1400'		→	0-4224'	---

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: None-Dry

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIL, CNL-FDC-GR, BHC-GR

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24.0#	169'	12-1/4"	150 sx.	0'

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3000-3100'	45 sx. cement - Plug #1
2350-2450'	45 sx. cement - Plug #2
1400-1550'	60 sx. cement - Plug #3

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
None-Dry		

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: 2 copies: IES, FDC-GR, CNL-GR, Geological Report, DST

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [signature] TITLE Administrative Manager DATE 2-13-74

STORM CHOKE

*(See Instructions and Spaces for Additional Data on Reverse Side)

TYPE _____ Loc. _____

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Moenkopi	2090	2160	DST-1: Times 10-60-45-89. IH 782, IF 70, ISI 73, FF 50, FSI 40, FH 778. Rec'd 10' rathole mud.
Coconino	2447	2454	DST-2: Times 10-60-30-60. IH 897, IF 12, ISI 12, FF 9, FSI 9, FH 897. Rec'd 20' rathole fluid (mist water).
Hermosa	3812	3867	DST-3: Times 60-13-45-90. IH 1515, ISI 1524, IF 1450, FF 1526, FSI 1547, FH 1511. Test failed, leak in cross-over sub. Pressures unreliable.
Hermosa	3814	3869	DST-3: Times 60-12-60-120. IH 1531, ISI 1513, IF 566, FF 1229, FSI 1500, FH 1525. Rec'd 2825' water.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Carmel	220	
Navago	485	
Kayenta	920	
Wingate	1242	
Chinle	1525	
Shinarump	1794	
Moenkopi	1859	
Sinbad	2304	
Coconino	2444	
Organ Rock	3078	
Lower Carbonates	3222	
Hermosa	3566	
Leadville	4210	

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Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.: U-0141568

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ----

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER: Dry Hole (BLM Water Well)

7. UNIT AGREEMENT NAME: ----

2. NAME OF OPERATOR: Texas Gas Exploration Corporation

8. FARM OR LEASE NAME: TGEC-FEDERAL 11-24-13

3. ADDRESS OF OPERATOR: P.O. Box 52310, Houston, TX 77052

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1630' FNL & 1000' FEL Sec. 11 (NW SE NE)

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 11, T24S, R13E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): Gr. 4740.2'

12. COUNTY OR PARISH: Emery

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	X
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

After receiving verbal approval from the U.S.G.S. and the Utah Oil and Gas Conservat Division, the above well was plugged on Jan. 29, 1974 as follows:

Set plug #1 @ 3000-3100' with 45 sx. cement.
Set plug #2 @ 2350-2450' with 45 sx. cement.
Set plug #3 @ 1400-1550' with 60 sx. cement.

At the request of the Bureau of Land Management the well was released to them for conversion to a water well effective January 29, 1974.

18. I hereby certify that the foregoing is true and correct

SIGNED R. D. Benge TITLE Administrative Manager DATE 3-4-74

(This space for Federal or State office use)

APPROVED BY [signature] TITLE DISTRICT ENGINEER DATE MAR

CONDITIONS OF APPROVAL, IF ANY:

BLM PRICE

*See Instructions on Reverse Side